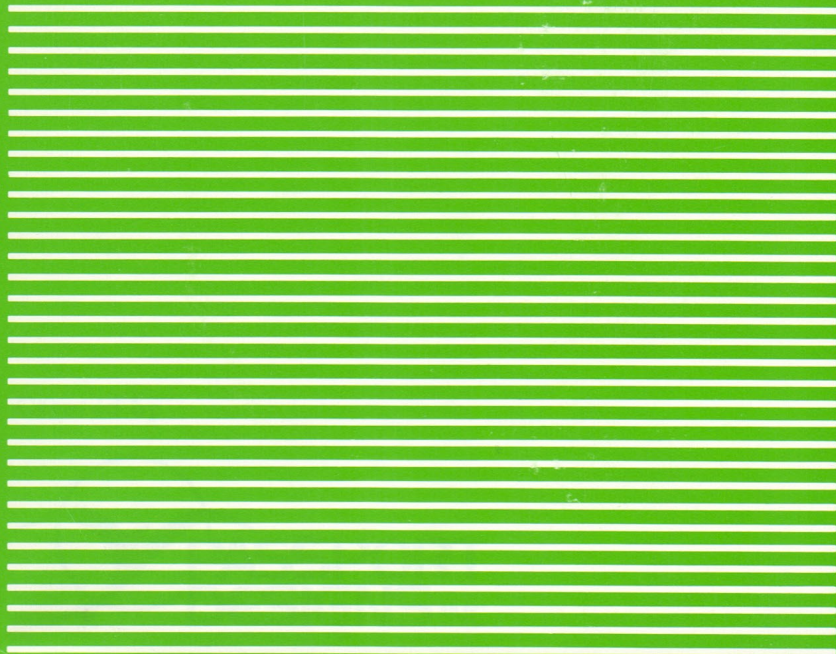


HesWare™

Bravo!™

Magic Music Series / Level 1

Instruction Manual



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Level 1

THE MAGIC MUSIC SERIES

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Guidebook by
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Created by



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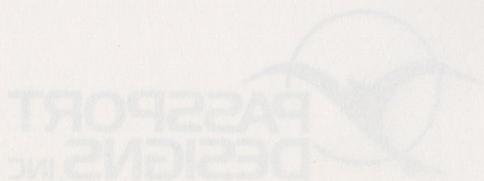
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CONTENTS

Teach Yourself Music with

BRAVO!

Level 1

THE MAGIC MUSIC SERIES

**Software by
PASSPORT DESIGNS**

**Guidebook by
MIKE BOOM**

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CONTENTS

Running Bravo	2
Load the Program	2
Using the Main Menu	3
Note Tutor	5
Name the Notes	6
How to Play	6
Help Options	7
Play the Songs	8
How to Play	8
Free Play	10
Upper and Lower Range	10
Using the Recorder	11
Symbol Tutor	12
Mini-Composer	12
The Cursors	14
Symbol Mode	15
Staff Mode	15
Filling Up and Turning Pages	15
Playing Back Your Compositions	16
Changing the Tempo	16
Changing the Voice	17
Fixing Mistakes	17

Mini-Composer (continued)

Saving Your Melody on Disk	18
Save	19
Delete	20
Catalog	20
Load	21
Erase	21
Musical Concepts	22
Four Attributes of Sound	22
Working with Pitch	23
The Staff	24
Working with Duration	25
Working with Timbre	29
Working with Volume	29
Some Projects to Try	30

BRAVO!



BRAVO! You are now a beginning musician. BRAVO!, the first program in the Magic Music Series, is your gateway to traditional music notation. With BRAVO!, you will be able to write simple melodies on your Commodore 64 computer, and then listen to them on playback.

Six different sections offer you the following:

- NOTE TUTOR and SYMBOL TUTOR are easy tutorials which present the treble clef, pitch names and locations, and different note lengths.
- NAME THE NOTES and PLAY THE SONGS are games based on what you have learned in the tutorials.
- FREE PLAY teaches you about pitch by using letters on the Commodore keyboard.
- MINI-COMPOSER puts everything together and gives you creative expression. You can write a melody on a staff, then play it back at different speeds and with seemingly different instruments.

BRAVO! is simple and easy. You don't have to know anything about music to use it. You can learn as you go.

RUNNING BRAVO!

To run **BRAVO!**, you need:

1. A Commodore 64 computer.
2. A monitor with a speaker (a TV set or the Commodore 1701 Color Monitor will be fine).
3. A 1541 disk drive.
4. A joystick
5. A formatted disk for storage. (See Appendix A.)

TO LOAD THE PROGRAM:

1. Turn on the disk drive, the monitor (TV set), and the computer.
2. Insert the disk in the drive with the label facing up and towards your hand.
3. Type:
 LOAD "*",8,1
 and press the "RETURN" key.
4. The computer screen will show:
 SEARCHING FOR *
 LOADING

5. After a few moments, the title screen will appear along with the following message:

BRAVO!

LEVEL 1

MAGIC MUSIC SERIES

Following this display, the screen will turn deep violet for a few seconds; then the “Main Menu” screen will appear.

USING THE MAIN MENU

The Main Menu is a white screen with a “MAGIC MUSIC” title, a list of activities, and a man to the side holding a baton. This man, the Magic Music Maestro, will make introductions. He’ll be your tutor through the different activities.

The menu of **BRAVO!** gives you a number of choices. There are six activities available:

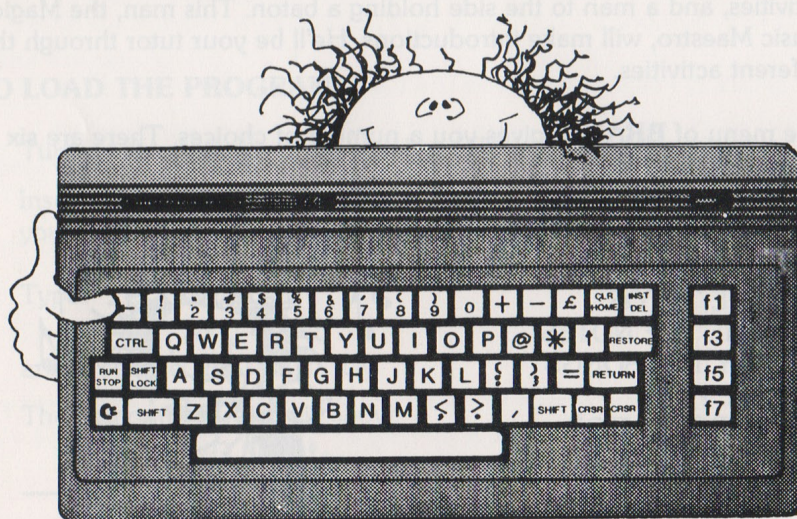
1. NOTE TUTOR
2. NAME THE NOTES
3. PLAY THE SONGS
4. FREE PLAY
5. SYMBOL TUTOR
6. MINI-COMPOSER



Each of these activities is a program in itself. To choose any activity, press the number of the activity you want. Your selection will start immediately.

If you go through the menu in its numerical order, the first activities will prepare you for the later ones. Run through them in order the first time through. Then go back and try them in any order you want.

Whenever you want to come back to the Main Menu to choose another activity, press the "BACK/ARROW" [←] key. This key is your panic button. No matter where you are in any activity, pressing this key will bring you back home to the Main Menu.

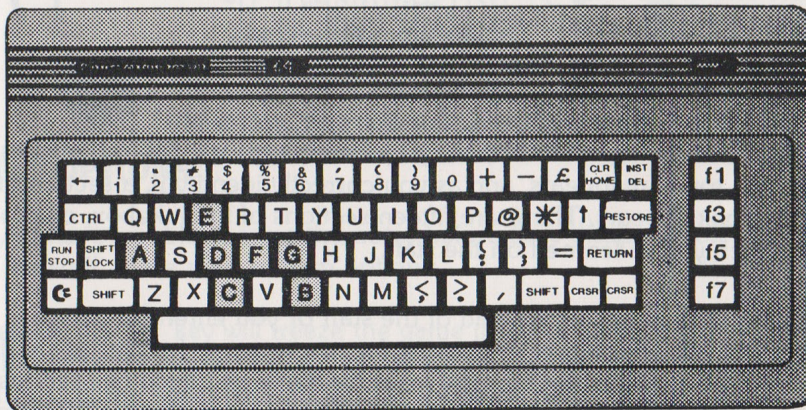


A theme song plays each time the Main Menu appears. This theme was written by composer John Williams for the movie "Raiders of the Lost Ark." You'll notice that this tune sounds a little different each time it plays. More about this later!

1. THE NOTE TUTOR

In the Note Tutor, the Maestro shows you how each note has a pitch, teaches you the pitch names, and shows you how to write them on a staff. He moves at any pace you wish: hit the space bar at the bottom of the keyboard to move on.

The Maestro will ask you to name the pitches you have just learned. To answer, press the appropriate letter key on the computer. They're on the left of the keyboard. If you press the wrong key, nothing will happen. When you hit the correct key, the Maestro will smile, and the pitch will play for you.



At the end of this tutorial, you have two choices: you can name the pitches again by pressing the space bar, or you can go back to the Main Menu by pressing the BACK/ARROW key. Once back in the Main Menu, you can choose another activity, or run the Note Tutor again.

2. NAME THE NOTES

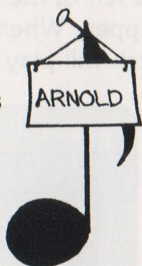
Name the Notes is a game using the skill you learned in the Note Tutor. The object is to build a jukebox at the bottom of the screen. You can do this by correctly identifying pitches that the Maestro shows you.

HOW TO PLAY

To start the game, press any key on the keyboard. The Maestro will wave his baton, and a note will glide from right to left on the staff. Before the note disappears at the end of the staff, identify its pitch by pressing the correct letter key, as you did in Note Tutor.

If you identify one pitch correctly twice in a row, a section of the jukebox appears. For example, you might get the C at the top of the staff right when it appears. Several pitches later, the top C reappears, and as you correctly identify it, a section of the jukebox appears. There are fifteen sections of the jukebox, one for each pitch you've learned on the staff.

If a note disappears off the end of the staff or you enter the wrong pitch, you have to start over working for two in a row for that pitch. If you make a mistake, the Maestro loses his smile and becomes serious. Don't worry. Entering four correct pitches in a row makes the Maestro smile again.



When you finish all fifteen pitches, the jukebox will be completed, and will play for you. Watch the Maestro!



HELP OPTIONS

If you have trouble naming the notes before they disappear off the end of the staff, there are two help options:

Pressing the "P" key will freeze the game (Pause), giving you time to think about the name of the pitch. Press any key on the keyboard to start the game again, and then press the letter name of the pitch.

Press the "SHIFT" key to show you the pitch name for each line and space of the staff. You'll see the letters at the right of the staff. This helps you identify the pitch of your note. The names disappear as the note disappears. There's no penalty for using either of these helpers.

At the end of the game, you have two options: go on to the next activity by pressing the space bar, or go back to the Main Menu by pressing the BACK/ARROW key. Remember: you can go back to the Main Menu at any time during this game using the BACK/ARROW key.

3. PLAY THE SONGS

Play the Songs, the second game, gives you a chance to identify pitches using letter keys. Instead of picking the pitches at random, as in Name the Notes, the Maestro gives you the pitches of nine different familiar songs. After you've identified all the pitches, the song will play for you.

HOW TO PLAY

Press any key to start the game. Your choices to pick a tune are:

1. Frere Jacques
2. London Bridge
3. Star Wars
4. Raiders of the Lost Ark
5. Ode to Joy
6. Old Smokey
7. E.T.
8. The First Noel
9. Superman

Frere Jacques and *London Bridge* are nursery songs. *Old Smokey* is a popular folk tune. *Ode to Joy* is a melody written by Ludwig van Beethoven over a hundred years ago, and is found in the last movement of his Ninth Symphony. *Star Wars*, *Raiders of the Lost Ark*, *E.T.* and *Superman* are all popular movie themes written by film composer John Williams.

Keep pressing number keys until you get the song you want. When you're ready to start playing, press the "RETURN" key, and the Maestro will begin. Each time he waves his baton, a note glides from right to left. Identify the pitch by pressing the correct letter key. You can get the pitch right by identifying it anytime before it disappears. Wrong guesses won't count against you, but a disappearing note will.

Each time you correctly name the pitch of a note, the note will sound, and the Maestro will go on to the next one. Four correct pitches in a row with no wrong guesses makes the Maestro smile.

If you finish the song and get three-fourths of the pitches right, the jukebox will appear and play the song you just worked through while the Maestro conducts. If you didn't get enough pitches correct, a "TRY AGAIN" sign will appear, and the Maestro will run through the pitches of the song once again.

You can stay in "Play the Songs" as long as you wish, going from song to song or repeating a favorite. Whenever you're ready to move on, press the BACK/ARROW key to return to the Main Menu.

4. FREE PLAY

With Free Play, you play your Commodore 64 using the letter keys. Unlike Name the Note and Play the Songs, where you see a pitch and respond by pressing the letter keys, you control the action here by pressing the keys first and hearing the pitches that they represent.

Since the pitch names are A, B, C, D, E, F, and G, these are the only letter keys that will work in Free Play. Try them out and play some melodies!

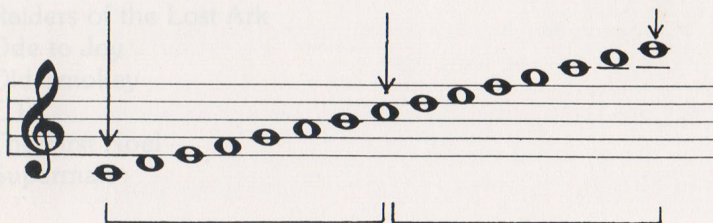
UPPER AND LOWER RANGE

The pitches D, E, F, G, A, and B occur twice on the staff: once on the lower part of it and once on the upper part. These are the *upper* and *lower ranges*. Pitch C occurs three times: once at the bottom of the staff, once in the center, and once at the top. Because there is only one set of keys on the Commodore 64, you can only play one range at a time. If you want to change ranges, use the Function Keys at the right of the keyboard. Pressing the three upper Function Keys will give you three different range settings:

F1: Upper range and top C.

F3: Upper range and center C.

F5: Lower range and bottom C.



USING THE RECORDER

To record the pitches you play, use the Free Play Recorder. Pressing the space bar once will turn on the Recorder, and every pitch you press afterwards will be remembered (up to a limit of 240). If you fill up the recorder, it will give you this message:

THE SCORE IS FULL!
PRESS <SPACE> TO CONTINUE.

When you press the space bar a second time, you can see and hear the pitches you recorded by going to the Mini-Composer, where they're recorded. While you can do many things in the Mini-Composer, they will be explained more fully in the Mini-Composer section. For now, just play back your pitches. Press the "P" key, and playback begins. When it's finished, you can play it again, or use the BACK/ARROW key to go back to the Main Menu, and then back to Free Play.

Beware of one very important thing! Each time you use the Free Play Recorder, it erases whatever you had stored previously in the Mini-Composer and starts over with your new pitches. Don't erase something you really want to keep by turning on the Free Play Recorder.

To tell if the Recorder is on or off, you can look at the bottom of the screen, where a line will say:

RECORDER IS ON

or

RECORDER IS OFF

Once the Recorder is on, you can only turn it off by leaving Free Play to go to the Mini-Composer or the Main Menu.

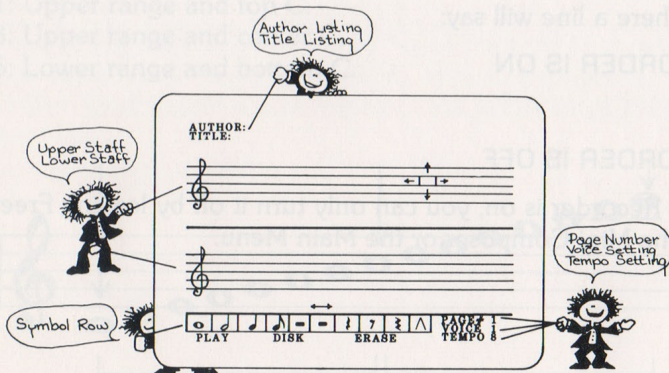
5. SYMBOL TUTOR

In the Symbol Tutor, the Maestro teaches you about *note values* and the symbols used to express them. A note's value determines how long it lasts. You can see the Maestro measuring the notes in *beats* as he moves his baton up and down, once for each beat. You'll also hear a tapping sound like the sound of a metronome; one click for each beat.

Like the Note Tutor, you can pace your progress through Symbol Tutor by pressing the space bar only when you're ready to go on. At the end of the tutorial, you can press the space bar to go to the next activity, or press the BACK/ARROW key to return to the Main Menu.

6. MINI-COMPOSER

The Mini-Composer allows you to use everything you've learned in the other activities. Now you can create your own melodies. When you enter the Mini-Composer, you'll see two staves, one above the other. At the top of the screen is an author and title listing, and at the bottom is a row of music symbols, and several words with characters emphasized in black.



If you haven't used the Free Play Recorder since you loaded **BRAVO!**, you should see Beethoven's *Ode to Joy* on the screen. If you have used the Recorder, *Ode to Joy* will be erased, and whatever you recorded will be in its place.

TRYING OUT THE MINI-COMPOSER

Before you learn how the Mini-Composer works, you may wish to try it out. It's easy! Plug a joystick in CONTROL PORT 2 on the right side of the computer, and start pressing the joystick button. Notes should play and appear on the screen. Move the joystick up and down before you press the button—you should get some higher and lower pitches. You can play this way as long as you like; you might change the notes already on the screen, but you won't hurt anything on the computer. When you're ready, you'll learn how to control the Mini-Composer.

THE MINI-COMPOSER MENU AND SCREEN LAYOUT

The words with emphasized characters scattered around the screen are the Mini-Composer Menu, which gives you a list of activities you can do within Mini-Composer:

AUTHOR:

TITLE:

PLAY

DISK

ERASE

PAGE#

VOICE#

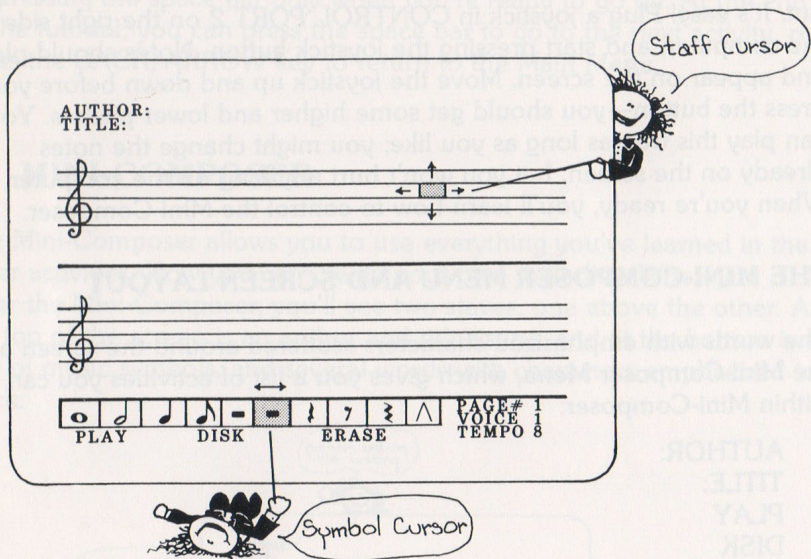
+—TEMPO

Choose any activity by entering the emphasized character.

Enter notes on the two staves. The row of symbols at the bottom of the screen lets you choose note and rest values.

THE CURSORS

The two patches of blue on the screen are the cursors. You use them to put notes on the screen. The upper one is the *staff cursor*, and the lower one is the *value cursor*. Use the cursors one at a time, whichever one is active will flash on and off. To change from one cursor to the other, hit the RETURN key.



To move the cursors around on the screen, use a joystick. Plug it into "CONTROL PORT 2" on the right side of the computer. The joystick will work in two different ways, depending on which cursor is active. If the staff cursor is active, it operates in *staff mode*. If the symbol cursor is active, it works in *symbol mode*.

Symbol Mode

To get to symbol mode, press "RETURN." Push the joystick left and right to move the symbol cursor left and right until you find the symbol you want. Push the joystick up and down to move the staff cursor up and down the staff to the pitch you want. After both symbol and pitch are chosen, press the joystick button; a note or rest will appear on the staff where the staff cursor is resting. The pitch of the note or the length of the rest will play. Then the staff cursor will move one position to the right so that you can enter the next note.

Staff Mode

The staff mode is used to change or correct previous notes. To change modes, press "RETURN." Using the cursor in staff mode is similar to symbol mode, but not quite the same. Pushing the joystick up and down moves the staff cursor up and down, but pushing it left and right will not move the symbol cursor at all. Instead, it moves the staff cursor back and forth over the notes you've already entered. When you've chosen the pitch you want, press the joystick button and whatever symbol is highlighted at the bottom of the screen will appear there. The note or rest will play, and the cursor will move one position to the right. Since you can backtrack over previous notes, staff mode is an excellent way to correct mistakes you've made.

FILLING UP AND TURNING PAGES

When you fill up the upper staff, the staff cursor will automatically jump down to the beginning of the lower staff and start entering symbols there. When the lower staff is filled, the Mini-Composer jumps to a new page and starts over. There are ten different pages; at the end of the last page, the staff cursor will stay on the last note if you try to enter new notes.

On each page, the page number is shown in the lower right hand corner of the screen after the word "PAGE#." To look through the different pages of your melody, use the number keys on the computer. Press "1" through "9" for pages 1 through 9, and use the 0 key to get page 10. The staff cursor will appear in the upper left hand corner of whatever page you turn to. By pressing the "1" key, you can always get back to the beginning of your melody.

PLAYING BACK YOUR COMPOSITION

Press "P" for Play to play back your melody. Mini-Composer will play your song from wherever the staff cursor is resting to the last symbol entered. To begin at the first note in your composition, press the "1" key and the cursor will go to the first note on the first page. To stop before the end, hit the space bar: the music will stop, and Mini-Composer will return to your starting point.

While your music is playing, you can't use the other Mini-Composer commands like Tempo or Voice, but once it's stopped, you have full control over those commands.

CHANGING THE TEMPO (SPEED)

If you want to speed up or slow down the way your melody plays, use the "+" or "-" keys to change the tempo. These two keys change the setting up or down by one. There are 10 different settings; 1 is the slowest, 10 is the fastest. When you've set the tempo to the value you want, hit "P" again to hear the new tempo.

CHANGING THE VOICE

You can also alter the way the melody sounds by changing the voice setting. Just as ten different people have different sounding voices, the Mini-Composer has ten different voices or instrument sounds. Pressing the "V" key will increase the voice setting by one and change the voice. When the setting reaches 10, pressing "V" will set it back to 1. Try playing a melody with different voices.

FIXING MISTAKES

After you've played your melody, you might want to make some changes in it. To do this, use the joystick in the staff mode to put the staff cursor over the bad note (which is called a *clinker* or a *clam* by musicians.) Replace the note with one of the right length or pitch by entering a new note (using the joystick button.)

To be rid of the note entirely, move the symbol cursor (using the joystick in symbol mode) over to the far right, and put it over the lightning bolt symbol. (Did you wonder what it was for?) Press the joystick button; the note underneath the staff cursor will be deleted. The notes following it will all move over to the left to fill in the gap.

If you want to add a note or rest, use the "insert" symbol. Located right next to the lightning bolt, it looks like a wedge pointing up. Position the blue symbol cursor over this "insert" symbol and press "RETURN." The blue cursor will now be changed to the staff mode.

Place the cursor on the staff where you want to insert a note or rest and press the joystick button. The note or rest symbol under the cursor will be duplicated and your music score will be shifted one position to the right. To change the note or symbol that has just been inserted, follow the instructions in the first paragraph of this section.

FILLING IN THE AUTHOR AND TITLE LINES

When your melody is completed, you may wish to put your name on it. Use the Author and Title lines to caption it. Press "A" to enter the name of the author; a blinking black cursor will appear in the author line. Type in any name you want; maximum limit is 31 characters. Use the INST/DEL key to back up and rub out any mistakes. Once you've typed out the name, press the "RETURN" key to enter it, and you'll be back at the blue cursor.

Entering a title works just like the Author line: press "T" to get started, type in the title, then press "RETURN."

If you want to redo either the Author or Title line, just press "A" or "T" again, and type over what you typed in before.

SAVING YOUR MELODY ON DISK

You've spent so much time creating your melody you may wish to save it on a disk. To do so, go to the Disk Storage Menu. Press "D" and there you are.

The Disk Storage Menu

The Disk Storage Menu is titled "STORAGE OPTIONS." It lists five options:

- LOAD
- SAVE
- DELETE
- CATALOG
- QUIT

Pick any option by entering the first letter.

QUIT

Press the "Q" key to leave the Disk Storage Menu and return to the Mini-Composer screen.

SAVE

To use this option, you need a second floppy disk. You can't save a melody on your **BRAVO!** disk. It's protected to prevent erasure of the main program. Format your second floppy disk. To do this, read the formatting instructions in Appendix A at the back of this manual.

To save a melody on disk:

1. Insert your formatted disk in the disk drive and close the latch.
2. Press "S" for Save. The computer screen will show:
FILENAME?:
3. Make up a name for your melody and type it in. It can be up to 16 characters in length. Use the INST/DEL key to delete any mistakes. After the name is typed, press the "RETURN" key.
4. The screen will say:
SAVING [the name of your melody]
After a few seconds, the screen will go blank, and return to the Mini-Composer screen. Your melody is now saved on disk.

DELETE

To delete any melody you have saved, press "D" to return to the disk storage menu. Then:

1. Press "D" for Delete. The computer screen will show:

FILENAME?

2. Type in the name of the melody file you want to delete.

3. Press the RETURN key. The screen will show:

ARE YOU SURE? (Y/N)

If you want to delete the file, press "Y." If you change your mind about deleting it, press "N."

CATALOG

For a list of songs saved on your disk, press "D" to get the storage options on the screen. Then press "C" for "catalog." The file names of the songs, and other information, will appear on the screen.

The black top line is the name of the disk in the disk drive. The lines following are the file names for each song, preceded by a number showing how many blocks of disk space they occupy. The bottom line of the catalog shows how many empty blocks are left on the disk. About 220 songs can be stored on each disk.

To load any of these songs into the computer, follow the instructions given below.

After you've looked at the disk catalog, hit any key to go back to the Storage Options screen.

LOAD

To listen to any melody you saved on a disk, load it back into Mini-Composer to play it back. Press "D" to get to the Storage Menu. Then:

1. Press "L" for Load. The screen will show:

FILENAME:

2. Type in the name of your melody.

3. Press the "RETURN" key. The screen will show:

SEARCHING FOR (the name of your melody)
LOADING

After your song is loaded, the screen blanks out for a few seconds. You are then returned to the Mini-Composer screen, where you can play the song.

Remember: loading a song will automatically erase whatever was in the Mini-Composer before you started loading. If you want to keep the contents of the Mini-Composer, save it before you load something new.

ERASE

Erase does just that to the contents of the Mini-Composer. Use this after you've saved a melody you want to keep and want to start on a new one, or whenever you want to get rid of a song you don't like. Here's how to do it.

1. Type "E" for Erase. The screen will show:

ERASE ALL: ARE YOU SURE? (Y/N)

A double check gives you a chance to reconsider. Do you really like the song after all? Did you hit the E key by mistake? If so, hit any key but the "Y" key, and all will be forgiven. If you really want to erase, then:

2. Press "Y" for Yes. The screen will blank out for a few seconds and return to a newly emptied Mini-Composer.

MUSICAL CONCEPTS COVERED BY BRAVO!

BRAVO! the first program in the Magic Music Series will start you on the path to reading, writing, and performing music. It is not a comprehensive program in music education. Using **BRAVO!**, however, you encounter many different aspects of music and sound. Here are some of the underlying concepts that tie them all together.

THE FOUR ATTRIBUTES OF SOUND

Any sound can be distinguished by four different attributes:

- *Pitch*
- *Timbre*
- *Duration*
- *Volume*

Changing any one of these attributes makes a sound different from what was originally heard.

Pitch is the quality most often associated with music. We usually think of pitch as being high or low; women usually have high voices, men usually have low voices. A violin can play higher pitches than a string bass, which plays low pitches.

The *duration* of a sound is how long a sound lasts from the instant of hearing to the instant of silence. Duration can be long or short. A toot of an automobile horn is short; leaning on the same horn can seem interminably long.

Timbre (pronounced tamber) is the color of a sound. Just as you can tell two people apart by the color of their voices, timbre distinguishes many otherwise similar sounds from each other. For example, a flute and a saxophone may play the same melody in exactly the same way, but they can be told apart because each instrument has a distinct timbre.

Volume is the easiest of the attributes to understand. Volume is how loud or soft a sound is. The volume knob of a radio makes music louder or softer, but doesn't change it otherwise.

WORKING WITH PITCH

Learning a song by ear, that is, listening to someone sing or play it and trying to repeat it, does not require writing down the pitches we want. Writing down what is heard so it can be repeated later or be sent to someone else who hasn't heard it, requires a system of musical notation.

The Scale

Between any low note and high note is an infinite number of pitches. Try it. Humming a low pitch and then slide up to a higher pitch. With so many pitches in between, writing them down seems impossible. It's easier than it seems, though, since music traditionally uses a certain set of pitches, skipping all the pitches in between. This set of pitches is called a *scale*. A scale was introduced in the Note Tutor.

Pitch is easier to notate. As we go higher in a scale, the pitches we hear seem to repeat themselves. Try this. Play a bottom C, a center C, and a top C in Free Play. Even though the pitch is higher each time, the three pitches sound like three versions of the same note. This effect is called an *octave*, Italian for eighth, because the pitches seem to start repeating every eighth note in a standard music scale.

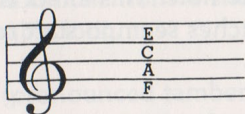
Since the pitches repeat themselves, only seven names are needed for the different pitches that are repeated in a scale. The Maestro taught you that the names are the letter names A, B, C, D, E, F, and G, which repeat as you go higher or lower in a scale.

There are many kinds of scales used in music. One of the most common scales is the *C major scale*. When you play a C major scale, you start and end on a C. A melody written in C major uses all the pitches of a C major scale, and gives the pitch of C central importance when you listen to it. Since the C major scale is the easiest one to notate, **BRAVO!** uses it to introduce notation. Other scales and aspects of pitch are covered in **ENCORE!** another Magic Music program.

THE STAFF

We could use only note names to write down a melody, but it's much easier to use a *staff*. This is a traditional way to notate music. Used for hundreds of years, it is a simple way to write down pitches. When you place a note on a staff, you put it higher for a higher pitch, lower for a lower pitch.

To make the staff precise, alternate lines and spaces are used to position notes, and to give the lines and spaces names. See Note Tutor for those letter names. An easy way to remember the names, looking at the spaces from low to high, is that they spell FACE. The line names from bottom to top are EGBDF, easily remembered Every Good Boy Does Fine.



The Maestro introduced you to *ledger lines*, used to locate pitches too high or low to fit on the staff. These lines can go as low or high as needed, using as many lines as necessary. Notice the symbol at the left hand side of the staff. This is a treble clef and identifies the range of the pitches that occur in the middle to high range of pitches. Other ranges are marked by different clefs. **BRAVO!** stays within the treble range. Thus, the treble clef is the only one introduced.

Controlling Pitch

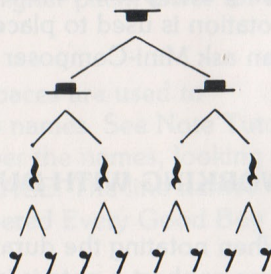
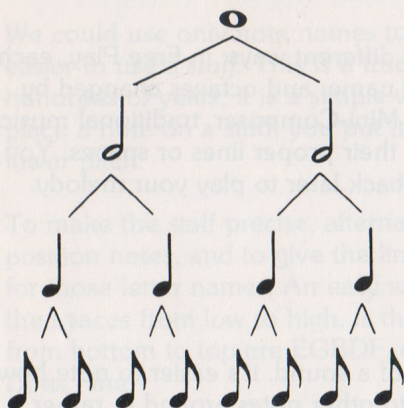
In **BRAVO!**, pitch is controlled in two different ways: in Free Play, each pitch is called up by typing in its letter name, and octaves changed by using the special function keys. In the Mini-Composer, traditional music notation is used to place the notes on their proper lines or spaces. You can ask Mini-Composer to read them back later to play your melody.

WORKING WITH DURATION

When notating the duration or length of a sound, it's easier to note how long or short a note is in relationship to other notes around it, rather than give it a definite length (such as .666 seconds or half a minute). This way, the melody can be speeded up or slowed down without having to rewrite the length of each note.

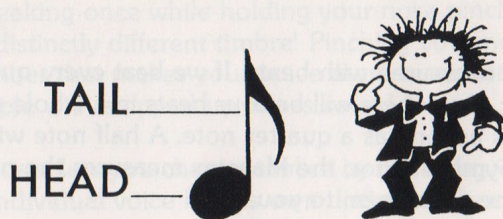
Notes and Rests

In Symbol Tutor, you learned several different types of notes and rests, and how long they are in relationship to each other. A whole note is the longest note and an eighth note is the shortest. The figure below shows how notes and rests relate to each other. It takes eight eighth notes, four quarter notes, or two half notes to last as long as one whole note. This is how they got their names.

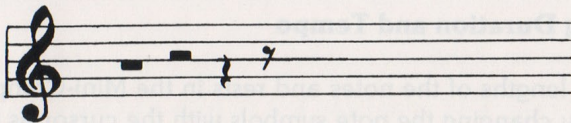


Notes are put on the staff, in the order we want them read. Notes are read from left to right. At the end of one staff, we jump down to the beginning of the next staff. At the end of one page, we go to the top of the next one.

To insure that a note is put in the correct pitch position on the staff, look at the *note head*. This is the circular part of a note. The line coming from it in quarter and eighth notes is called the *note tail*. The location of the head determines the pitch; the location of the tail is unimportant.



Since a rest has no pitch, its location is always the same. A whole rest hangs just below the middle line of the staff, a half rest lies just above the middle line. Quarter rests and eighth rests are always as close to the center of the staff as possible.



The Beat and Tempo

Listening to music, we sometimes tap our feet to it and thus pick out the *beat* of the music. A beat is a steadily occurring change in the music. It can be fast or slow. The speed of the beat is called the *tempo*. Music with a fast tempo has a fast beat; music with a slow tempo has a slow beat.

A note can be measured with beats. If we beat every quarter note in a piece of music, then there will be four beats in a whole note, since it lasts four times as long as a quarter note. A half note will have two beats. In the Symbol Tutor, the Maestro measures the notes and rests with beats as he gives them to you.

The duration of any note, such as a whole note, can either be short or long depending on whether you want a fast or slow tempo. You can make a whole note last as long as four seconds, as short as one second, or any other length by taking different tempos when you play the music. If the whole note is long, then accompanying half notes and quarter notes will also be long, but still only one half and one quarter the length of the whole note. If you speed up the tempo and make the whole note shorter, the half notes and quarter notes will also be shorter. The relative length of the different notes remains constant, even if the tempo changes.

Controlling Duration and Tempo

The relative lengths of the notes and rests in the Mini-Composer are controlled by changing the note symbols with the cursor as notes are put up on the staff. To speed up or slow down the melody when it is played, use the plus and minus keys on the computer.

WORKING WITH TIMBRE

Traditionally, if you want to change the timbre of a melody or sound, you ask for a different instrument to play the melody. This process is called *instrumentation* or *orchestration*. Also, you can change the timbre of an individual instrument or voice by changing its structure. Try it out by speaking once while holding your nose pinched shut. You'll notice a distinctly different timbre! Pinching your nose cuts off a resonating chamber that makes your voice more resonant and mellow. This is why people with stopped up noses sound funny.

The Mini-Composer lets you change timbre by changing voices with the "V" key. Each individual voice has its own distinct timbre. You can get some nice effects by playing a melody with just the right voice. Notice that the voice randomly changes each time the "Raiders of the Lost Ark" theme comes back in the Main Menu.

WORKING WITH VOLUME

When you notate music, the Italian words *forte* and *piano*, meaning strong and soft, are used to make a melody loud or soft. In **BRAVO!**, however, controlling volume is simplicity itself: just reach out and use the volume knob on your TV set or monitor to change the volume.

SOME PROJECTS TO TRY

IN FREE PLAY:

Holding down the “A” key with one finger, use another finger to press the other note keys. When you let up on the second key, the A will sound again. With the “A” key down, make some other melodies using different keys. The A will come back as a center sound, giving the melody a distinct flavor. Press and unpress the second key very quickly: the pitch will jump back and forth between A and the second note. This is a *trill*. What other notes can you trill? Can you make melodies holding down a different key?

IN THE MINI-COMPOSER

1. Write a melody using just these pitches: C, D, E, G, and A. Don't use F and B. You should get a slightly Oriental sounding melody.
2. Write a melody with a rest between every note. After playing it, go back, use the lightning bolt to delete all the rests, and then play it again. Which version do you like better?
3. Write a melody using the same combination of note values over and over again. For instance, try a melody that uses a half note followed by a quarter note again and again. Or try a quarter note followed by two eighth notes, or a half note followed by a quarter followed by an eighth, or any other pattern you wish.
4. Write a melody that goes from low to high and back down again several times. As you play it back, use the volume knob to turn up the volume each time the melody goes up. As it goes down, turn the volume knob back down. Try it again, turning the volume up every time the melody goes down.

5. Can you play a melody backwards? Take one of your melodies and copy it down on paper. (Use the staves at the back of this manual.) Erase the screen, and reenter your melody from the paper, starting with the last note and going to the first. Play it back, and you have a backwards version of your melody! You can try backwards and upside down if you turn the paper upside down and enter the notes. Be sure you don't have anything over a high A in the original melody.
6. Write a very slow and serious sounding melody. Now play it back using the silliest sounding voice you can find.
7. With the right connector, you can attach the sound cord from your computer to a tape recorder instead of your monitor. Then record your favorite songs on tape. You can also feed the sound into your stereo system for high quality reproduction.

Keep experimenting! You'll be surprised at the number of sounds and melodies you can get. In no time at all, you'll hear the cries of "Bravo!, Bravo!" as you show off your newly found skills in electronic music!

APPENDIX A: DISKETTE INFORMATION

Formatting a Diskette

Before you can use a diskette to save your music, you need to set up “magnetic signposts” for the disk drive to read. You give the diskette a name and a two-character ID number. This process is called formatting the diskette.

CAUTION: Formatting a diskette erases any files currently on that diskette.

To format a diskette, remove the Bravo! program diskette and insert a blank diskette. Type in the following:

OPEN 15,8,15 and press RETURN

Then give the diskette a name and an ID number. For example:

PRINT#15,“NEW0:“BRAVOSONGS,01” and press RETURN

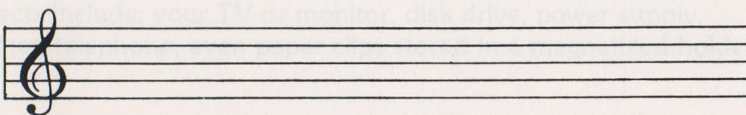
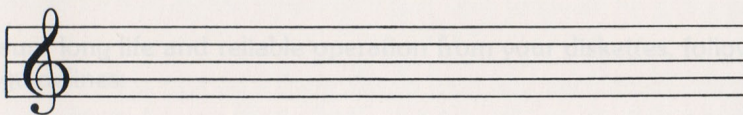
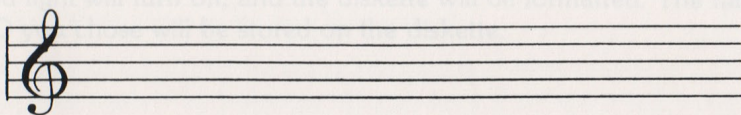
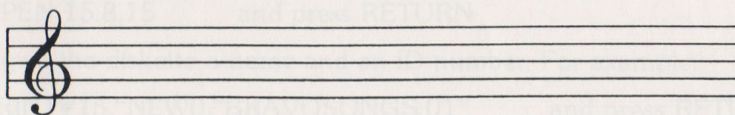
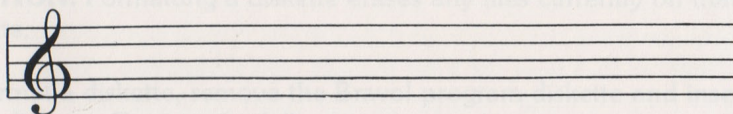
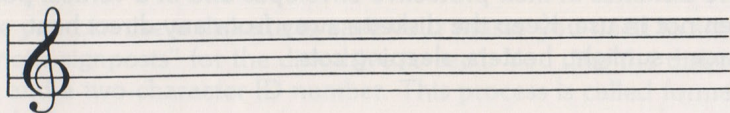
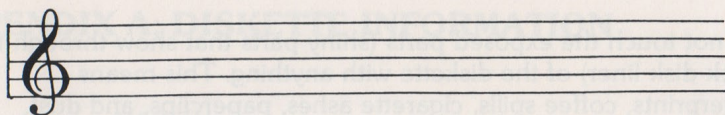
The red light on the disk drive will come on for about a minute; then the red light will turn off, and the diskette will be formatted. The name and ID you chose will be stored on the diskette.

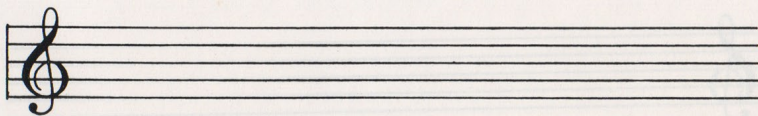
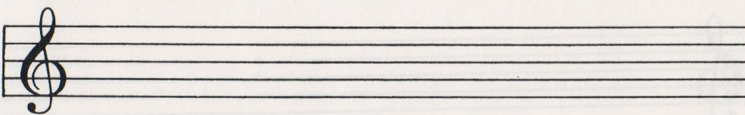
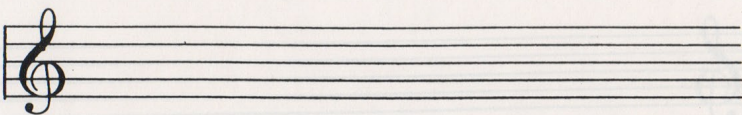
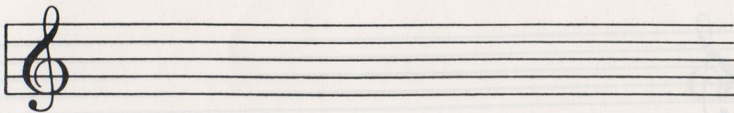
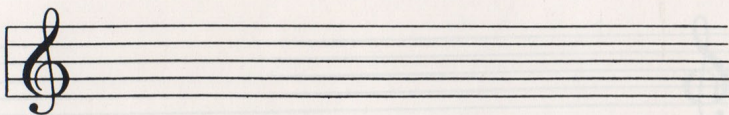
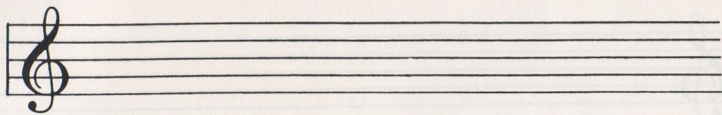
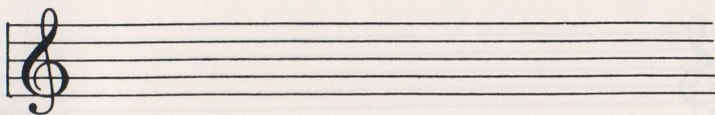
Diskette Care

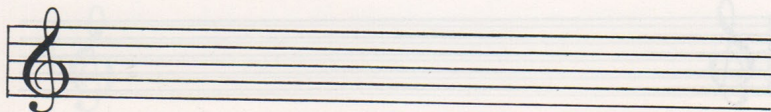
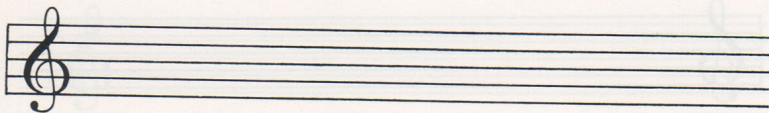
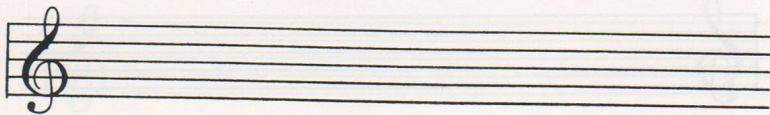
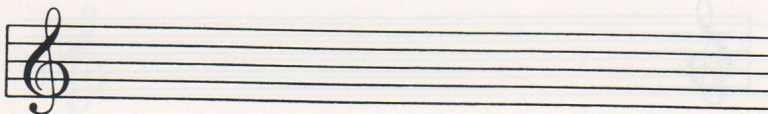
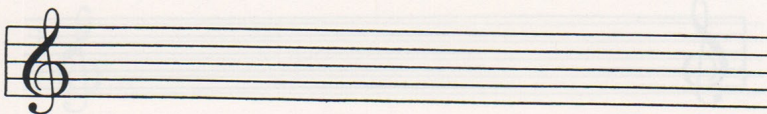
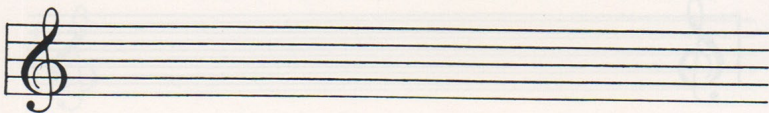
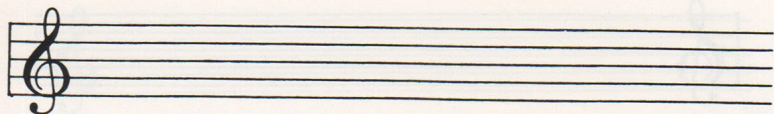
To ensure long life and reliable operation from your diskettes, follow these guidelines:

- Keep diskettes away from magnetic objects—information on the diskettes may be erased or become hopelessly deranged. Magnetic objects include: your TV or monitor, disk drive, power supply, printer, telephone, even paper clips stored in a magnetized holder.

- Do not touch the exposed parts (shiny parts that show through the black disk liner) of the diskette with anything. This means fingerprints, coffee spills, cigarette ashes, paperclips, and dust.
- Store diskettes in their protective envelopes and in a vertical position when not in use. Keep the diskette away from any direct heat source—sunlight, heaters, sleeping cats.







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